



<110> HAYSTEAD, TIMOTHY A

<120> SMOOTH MUSCLE MYOSIN PHOSPHATASE ASSOCIATED KINASE

<130> 1579-647

<140> 10/083,641

<141> 2002-02-27

<150> 60/271,436

<151> 2001-02-27

<160> 17

<170> PatentIn Ver. 2.1

<210> 1

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Endogenous kinase  
copurifies with SMPP-1M

<400> 1

Lys	Lys	Lys	Arg	Gln	Ser	Arg	Arg	Ser	Thr	Gln	Gly	Val	Thr	Leu
1				5					10					15

<210> 2

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: human pDAPK3

<400> 2

Met	Gly	Glu	Glu	Leu	Gly	Ser	Gly	Gln	Phe	Ala	Ile	Val
1				5					10			

<210> 3

<211> 320

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ZIP Kinase

<400> 3

Met	Ser	Thr	Phe	Arg	Gln	Glu	Asp	Val	Glu	Asp	His	Tyr	Glu	Met	Gly
1				5					10					15	

Glu	Glu	Leu	Gly	Ser	Gly	Gln	Phe	Ala	Ile	Val	Arg	Lys	Cys	Arg	Gln		
			20					25					30				
Lys	Gly	Thr	Gly	Lys	Glu	Tyr	Ala	Ala	Lys	Phe	Ile	Lys	Lys	Arg	Arg		
		35					40					45					
Leu	Pro	Ser	Ser	Arg	Arg	Gly	Val	Ser	Arg	Glu	Glu	Ile	Glu	Arg	Glu		
	50					55					60						
Val	Asn	Ile	Leu	Arg	Glu	Ile	Arg	His	Pro	Asn	Ile	Ile	Thr	Leu	His		
	65				70					75					80		
Asp	Ile	Phe	Glu	Asn	Lys	Thr	Asp	Val	Val	Leu	Ile	Leu	Glu	Leu	Val		
				85					90						95		
Ser	Gly	Gly	Glu	Leu	Phe	Asp	Phe	Leu	Ala	Glu	Lys	Glu	Ser	Leu	Thr		
			100					105						110			
Glu	Asp	Glu	Ala	Thr	Gln	Phe	Leu	Lys	Gln	Ile	Leu	Asp	Gly	Val	His		
		115					120					125					
Tyr	Leu	His	Ser	Lys	Arg	Ile	Ala	His	Phe	Asp	Leu	Lys	Pro	Glu	Asn		
	130					135					140						
Ile	Met	Leu	Leu	Asp	Lys	Asn	Val	Pro	Asn	Pro	Arg	Ile	Lys	Leu	Ile		
	145				150					155					160		
Asp	Phe	Gly	Ile	Ala	His	Lys	Ile	Glu	Ala	Gly	Asn	Glu	Phe	Lys	Asn		
				165					170					175			
Ile	Phe	Gly	Thr	Pro	Glu	Phe	Val	Ala	Pro	Glu	Ile	Val	Asn	Tyr	Glu		
			180					185						190			
Pro	Leu	Gly	Leu	Glu	Ala	Asp	Met	Trp	Ser	Ile	Gly	Val	Ile	Thr	Tyr		
	195						200					205					
Ile	Leu	Leu	Ser	Gly	Ala	Ser	Pro	Phe	Leu	Gly	Glu	Thr	Lys	Gln	Glu		
	210					215					220						
Thr	Leu	Thr	Asn	Ile	Ser	Ala	Val	Asn	Tyr	Asp	Phe	Asp	Glu	Glu	Tyr		
	225				230					235					240		
Phe	Ser	Ser	Thr	Ser	Glu	Leu	Ala	Lys	Asp	Phe	Ile	Arg	Arg	Leu	Leu		
				245					250					255			
Val	Lys	Asp	Pro	Lys	Arg	Arg	Met	Thr	Ile	Ala	Gln	Ser	Leu	Glu	His		
		260						265					270				
Ser	Trp	Ile	Lys	Val	Arg	Arg	Arg	Glu	Asp	Gly	Ala	Arg	Lys	Pro	Glu		
	275						280					285					
Arg	Arg	Arg	Leu	Arg	Ala	Ala	Arg	Leu	Arg	Glu	Tyr	Ser	Leu	Lys	Ser		
	290					295					300						
His	Ser	Ser	Met	Pro	Arg	Asn	Thr	Ser	Tyr	Ala	Ser	Phe	Glu	Arg	Phe		
	305				310					315					320		

<210> 4  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: rat DAP-like kinase

<220>  
<221> Unsure  
<222> (6), (10)  
<223> Xaa can be any amino acid

<400> 4  
Met Leu Leu Asp Lys Xaa Ile Phe Xaa Arg Pro Ile Gln  
1 5 10

<210> 5  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: D-glycerate dehydrogenase

<220>  
<221> Unsure  
<222> (8), (10), (11) and (13)  
<223> Xaa can be any amino acid

<400> 5  
Met Thr Ile Ala Gln Asn Leu Xaa Tyr Xaa Xaa Ile Xaa  
1 5 10

<210> 6  
<211> 1093  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Putative nucleotide  
sequence of smooth muscle MYPT-Kinase

<220>  
<221> Unsure  
<222> (2), (7), (37), (39), (1056), (1081) and (1092)  
<223> N can be A, C, G or T

<400> 6  
gntatgnata tcggtttaat cggccggagc tcgcccncng ggcagctgga ctccctctca 60  
gacctcttc ttctcgccc tcagcacggg attaacctca cttgactgtt cttgggtccc 120

```

cggtgccggg ccagcgtcct ctcctcaag gcaatcccca agtgtctgtc atgaggctct 180
ttgggcagtt ctgttgttgt gggaaacctg ggaacagatg cacagaggct ggggtacaga 240
gtcctgcctt cctctgggtc tgcagcgctt agctgttctt tccccacag cggccagttc 300
gccatcgtgc gcaagtgcc a gcagaagggc accggcatgg agtacgcggc caagttcata 360
aagaagcggc gctgtccgtc cagccggcgc ggtgtgagcc gtgaggagat cgagcgcgag 420
gtgagcatcc tgcgcgagat ccgccacccc aacatcatca cgctgcacga tgtgttcgag 480
aacaagacag atgtgggtgct gatcttggag ctgggtgtccg gcggcgaaact ttctgacttt 540
ctggctgaga aggatcactg acagaggatg aggccacgca gttcctcaag cagatcctgg 600
acgggtgtcca ctacctgcac tccaagcgca tcgcgcactt tgacctgaag ccggagaaca 660
tcatgttgct ggacaagcat gcagccagcc cagcattaa gctcatcgac ttggcatcg 720
cgcacaggat cgaggccggt agcgagttca agaacatctt tggcacgcca gagttcgtcg 780
gtgaggggca ggtgtgggca ccacccgata gggtagattt tgcacggcct tggcctgacc 840
tgctcaaca atcctgtctt ccacagcccc tgagattgta aactatgaac cacttggttt 900
ggaagctgat atgtggagca tcggcgatc cactacatc ctgtgagtgc ctgagatggg 960
caggggcctc agactgtacc tgctagaggc ccagggatca gggctggcac ctctgcaaac 1020
tgcaaacact ggggctgaga gatgtccctg ggaacnctgg atatgcttgg gccccaccaa 1080
ngtaggacca tnc 1093

```

<210> 7

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Deduced amino acid sequence of rat  
aorta smooth muscle MYPT-kinase

<220>

<221> Unsure

<222> (1), (3) and (13)

<223> Xaa can be any amino acid

<400> 7

```

Xaa Met Xaa Ile Gly Leu Ile Gly Arg Ser Ser Pro Xaa Gly Gln Leu
  1             5             10             15

```

```

Asp Ser Leu Ser Asp Leu Leu Leu Ser Arg Pro Gln His Gly Ile Asn
          20             25             30

```

Leu Thr

<210> 8

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Deduced amino acid sequence of rat  
aorta smooth muscle MYPT-kinase

<400> 8

```

Leu Phe Leu Gly Pro Arg Cys Arg Ala Ser Val Leu Ser Leu Lys Ala
  1             5             10             15

```

Ile Pro Lys Cys Leu Ser  
20

<210> 9

<211> 125

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Deduced amino acid sequence of rat  
aorta smooth muscle MYPT-kinase

<400> 9

Gly Ser Leu Gly Ser Ser Val Val Val Gly Asn Leu Gly Thr Asp Ala  
1 5 10 15

Gln Arg Leu Gly Tyr Arg Val Leu Pro Ser Ser Gly Ser Ala Ala Leu  
20 25 30

Ser Cys Ser Phe Pro His Ser Gly Phe Ala Ile Val Arg Lys Cys Lys  
35 40 45

Gly Thr Gly Met Glu Tyr Ala Ala Lys Phe Ile Lys Lys Arg Arg Leu  
50 55 60

Pro Ser Ser Arg Arg Gly Val Ser Arg Glu Glu Ile Glu Arg Glu Val  
65 70 75 80

Ser Ile Leu Arg Glu Ile Arg His Pro Asn Ile Ile Thr Leu His Asp  
85 90 95

Val Phe Glu Asn Lys Thr Asp Val Val Leu Ile Leu Glu Leu Val Ser  
100 105 110

Gly Gly Glu Leu Phe Asp Phe Leu Ala Glu Lys Asp His  
115 120 125

<210> 10

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Deduced amino  
acid sequence of rat aorta smooth muscle  
MYPT-kinase

<400> 10

Gln Arg Met Arg Pro Arg Ser Ser Ser Ser Arg Ser Trp Thr Val Ser  
1 5 10 15

Thr Thr Cys Thr Pro Ser Ala Ser Arg Thr Leu Thr  
20 25

<210> 11  
<211> 55  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Deduced amino  
acid sequence of rat aorta smooth muscle  
MYPT-kinase

<400> 11  
Ser Arg Arg Thr Ser Cys Cys Trp Thr Ser Met Gln Pro Ala His Ala  
1 5 10 15  
Leu Ser Ser Ser Thr Leu Ala Ser Arg Thr Gly Ser Arg Pro Val Ala  
20 25 30  
Ser Ser Arg Thr Ser Leu Ala Arg Gln Ser Ser Ser Val Arg Gly Arg  
35 40 45  
Cys Gly His His Pro Ile Gly  
50 55

<210> 12  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Deduced amino  
acid sequence of rat aorta smooth muscle  
MYPT-kinase

<400> 12  
Ile Leu His Gly Leu Gly Leu Thr Cys Leu Asn Asn Pro Val Phe His  
1 5 10 15

Ser Pro

<210> 13  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Deduced amino  
acid sequence of rat aorta smooth muscle  
MYPT-kinase

<400> 13  
Asp Cys Lys Leu  
1

<210> 14  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Deduced amino  
acid sequence of rat aorta smooth muscle  
MYPT-kinase

<400> 14  
Thr Thr Trp Leu Gly Ser  
1 5

<210> 15  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Deduced amino  
acid sequence of rat aorta smooth muscle  
MYPT-kinase

<400> 15  
Tyr Val Glu His Arg Arg His His Leu His Pro Val Ser Ala  
1 5 10

<210> 16  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Deduced amino  
acid sequence of rat aorta smooth muscle  
MYPT-kinase

<400> 16  
Asp Gly Gln Gly Pro Gln Thr Val Pro Ala Arg Gly Pro Gly Ile Arg  
1 5 10 15

Ala Gly Thr Ser Ala Asn Cys Lys His Trp Gly  
20 25

<210> 17  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Deduced amino  
acid sequence of rat aorta smooth muscle  
MYPT-kinase

<220>

<221> Unsure

<222> (15), (17)

<223> Xaa can be any amino acid

<400> 17

Glu	Met	Ser	Leu	Gly	Thr	Leu	Asp	Met	Pro	Gly	Pro	His	Gln	Xaa	Arg
1				5					10					15	

Thr Xaa